
**Virginia Department of Mines, Minerals &
Energy
Division of Mines**

**Accident Investigation Report
Underground Coal Mine
Preparation Plant**

**Fall of Person Fatality
December 5, 2000**

**Consolidation Coal Company
Buchanan No. 1 Mine
Mine Index No. 11912AA
Buchanan County, Virginia**

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Ground View of Thermal Dryer Stack



View From Ground Level Looking Up To
First Level Walkway Platform



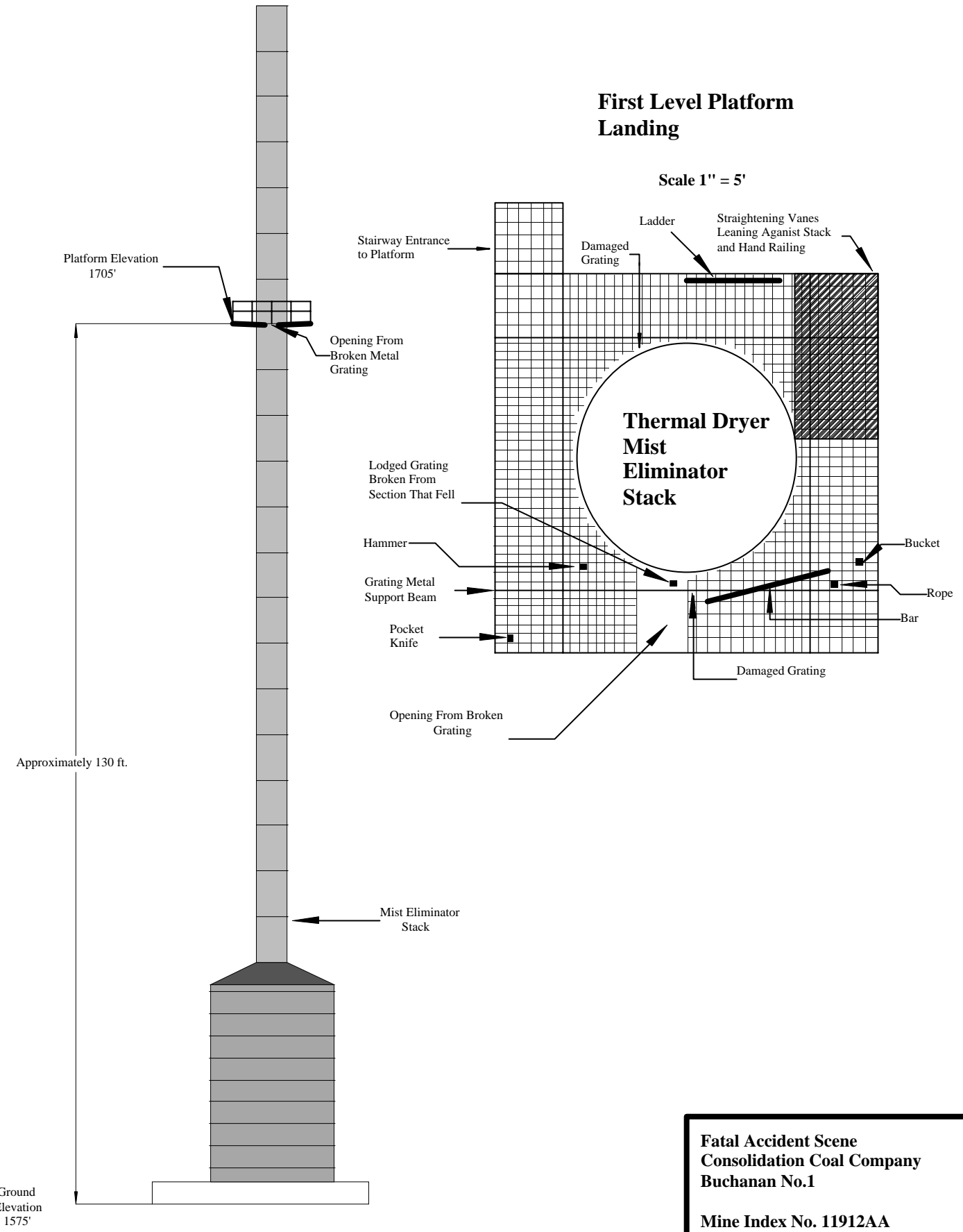
First Level Walkway Platform Landing - Location Where Grating Broke and Fell



Piece of Grating that Broke and Fell from the First Level Walkway Platform Landing

**First Level Platform
Landing**

Scale 1" = 5'

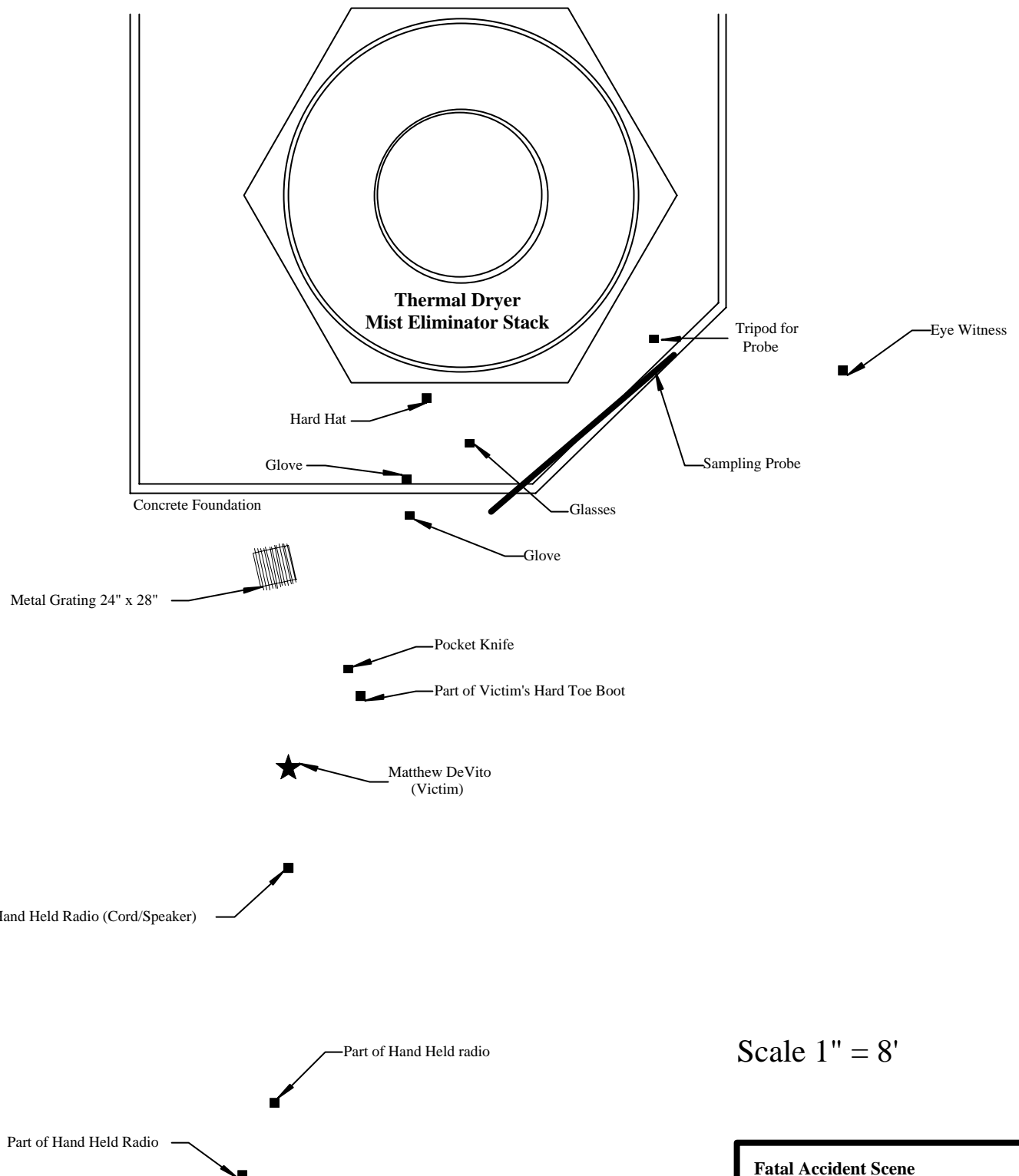


**Fatal Accident Scene
Consolidation Coal Company
Buchanan No.1**

Mine Index No. 11912AA

**Preparation Plant- Thermal Dryer
Mist Eliminator Stack**

December 5, 2000



Scale 1" = 8'

**Fatal Accident Scene
Consolidation Coal Company
Buchanan No.1**

Mine Index No. 11912AA

**Preparation Plant - Thermal Dryer
Mist Eliminator Stack - Ground
Level View**

December 5, 2000

**PREPARATION PLANT FALL OF PERSON FATALITY INVESTIGATION
REPORT
CONSOLIDATION COAL COMPANY
BUCHANAN NO. 1 MINE
MINE INDEX NO. 11912 AA**

On Tuesday, December 5, 2000, at approximately 10:00 a.m., a preparation plant fall of person accident occurred at the Consolidation Coal Company, Buchanan No. 1 Mine, Mine Index No. 11912AA. Matthew S. DeVito, Research Group Leader, was fatally injured when a piece of platform walkway metal grating floor material broke loose causing Mr. DeVito to fall approximately 130 feet to the ground below. Mr. DeVito was located on the first platform walkway landing of the thermal dryer mist eliminator stack and was making preparations to conduct environmental compliance emissions tests of the thermal dryer when the accident occurred. Mr. DeVito, age 45, had 20 years total experience with Consol Energy Inc., Research and Development Branch. The Division of Mines was notified at 10:20 a.m. on December 5, 2000, and a joint investigation with the Federal Mine Safety and Health Administration was initiated the same day. This mine is scheduled to receive two regular inspections every six months. The last regular inspection was completed on October 31, 2000 and a regular inspection was ongoing at the time of the accident.

COMMENTARY

Consolidation Coal Company, Buchanan No. 1 Mine is located three miles southeast of Oakwood, Virginia at the junction of State Route 632 and State Route 626, in Buchanan County. This underground mine is a multiple section shaft mine utilizing continuous mining and longwall mining methods. The underground mine is developed approximately 35,000 feet into the Pocahontas No. 3 coal seam. The preparation plant facilities are located adjacent to the underground mine along Page Fork on State Route 632. The preparation plant facilities include a clean coal thermal dryer unit that is located adjacent to the preparation plant. Approximately 19,000 tons of raw coal are processed per day at the preparation plant facilities. The preparation plant is operated three eight-hour shifts per day, seven days per week, with employees working a rotating schedule. There are 425 mine personnel employed for both surface and underground operations. The preparation plant facility employs 44 hourly and six salary personnel.

On Tuesday, December 5, 2000, at approximately 7:30 a.m. the day shift commenced work at the Consolidation Coal Company, Buchanan No. 1 Mine preparation plant facility under the direction of Mr. Tom Burton, general plant foreman. Mr. Burton was coordinating various work activities at the preparation plant office when the Consol Energy Inc., Research and Development Group arrived at approximately 8:00 a.m. The research group consisted of Mr. Matthew DeVito, Research Group Leader, Mr. Jeffrey Withum, Senior Research Technician and Mr. Dennis Kowalski, Technician. Mr. DeVito

had scheduled the mine visit with Mr. Burton approximately one week earlier to conduct the thermal dryer stack emissions tests. Upon arrival of Mr. DeVito, Mr. Withum and Mr. Kowalski at the preparation plant office, Mr. Burton informed the group that the thermal dryer facility was inoperative due to lack of water and that preparations were being made to restore the water supply. Mr. Burton explained to Mr. DeVito that because of the water problems and inoperative thermal dryer that emissions tests would have to be conducted during another shift. At approximately 9:00 a.m., the research group informed Mr. Burton that they would set up their equipment and make necessary preparations to conduct the tests on December 6, 2000. At this time, Mr. Burton departed the plant office to assist other mining personnel with repair work necessary to restore the water supply.

Mr. Michael Case, plant foreman, conducted hazard training for Mr. DeVito, Mr. Withum and Mr. Kowalski. The training also included recognizing the hazards of ice around the preparation plant, evaluating stairway step conditions and taking safety precautions when going up and down steps. Mr. Case advised the three men to take a hammer with them to remove any ice that they may encounter. Mr. Case also informed the research group that he would return later to assist in providing electrical power to their sampling trailer, which contained test sampling equipment.

The research group positioned the sampling trailer and other equipment to be used adjacent to the thermal dryer facility. They carried some equipment into the thermal dryer facility and began preparing equipment in the sampling trailer. Mr. Withum was preparing equipment inside the sampling trailer while Mr. DeVito and Mr. Kowalski were preparing equipment outside of the trailer. After preparing this equipment, Mr. DeVito and Mr. Kowalski began making preparations to move some of their equipment to the first level walkway platform located on the thermal dryer mist eliminator stack, where preparatory work and actual tests would be conducted. Mr. DeVito left Mr. Kowalski on the ground and proceeded to travel up the stack stairways toward the first and second platform landings where preparations would be completed prior to actual tests of emissions. As Mr. DeVito traveled up the stack stairways toward the first and second walkway platform landings where the tests would be conducted, he had no other communications with Mr. Kowalski until he reached the first platform landing.

Mr. Kowalski, while standing at the base of the thermal dryer mist eliminator stack, observed Mr. DeVito standing on the first walkway platform landing. While standing on the first platform walkway landing, Mr. DeVito contacted Mr. Kowalski by hand – held radio, reporting that ice had accumulated on the platform walkway grating and that he needed to remove the ice. Mr. DeVito instructed Mr. Kowalski to move back in the clear so that he could remove the ice. Mr. Kowalski moved back in the clear while positioning himself underneath a structure adjacent to the stack. While still observing Mr. DeVito, Mr. Kowalski responded back to Mr. DeVito by radio reporting that he was in the clear. Mr. Kowalski observed Mr. DeVito attempting to kick some ice on the platform walkway grating or moving his feet for some other reason. At this time, Mr. Kowalski saw something falling from the first platform walkway landing that he initially thought was a piece of ice but realized later that it was a piece of walkway grating material. Mr.

Kowalski then observed Mr. DeVito falling from the first platform landing striking the base of the mist eliminator stack before landing on the ground.

Mr. Kowalski yelled for Mr. Withum and ran to Mr. DeVito's location. Mr. Kowalski and Mr. Withum attempted to get a response from Mr. DeVito but were unsuccessful. Mr. Withum checked Mr. DeVito for vital signs and none were found. Mr. Kowalski traveled immediately to the plant office to get help and informed Mr. Case of the accident. Mr. Case instructed Mr. Burton to call the rescue squad. Mr. Kowalski and Mr. Case traveled back to Mr. DeVito's location. Mr. Case also examined Mr. DeVito for vital signs and none were found. Mr. Case and Mr. Withum performed cardiopulmonary resuscitation (CPR) until the Grundy Ambulance Service arrived and assumed control of emergency treatment. The Grundy Ambulance Service transported Mr. DeVito to the Clinch Valley Medical Center, Richlands, Virginia, where he was pronounced dead by Dr. Stephaniene at approximately 11:30 a.m.

STATEMENTS FROM MINE PERSONNEL AND OTHER FACTORS

Statements from mine personnel and other factors determined during the investigation revealed the following:

1. Mr. DeVito, Mr. Withum and Mr. Kowalski were employees of Consol Energy, Inc., Research and Development Branch, based in Pittsburgh, Pennsylvania. Mr. DeVito was identified as the Research Group Leader.
2. The work assigned to the research group was to conduct environmental compliance emissions tests of the thermal dryer stack at the Consolidation Coal Company, Buchanan No. 1 Mine. A series of three separate tests that normally require one to two hours per test would be completed. These tests must be completed while the thermal dryer is operating. Emissions tests are obtained from a port located near the bottom of the stack at the same time that air velocity measurements are taken from a port located on the second platform walkway landing. The procedures for taking air velocity measurements require that 12 measurements be obtained at specified depths into the stack from one port and 12 more similar measurements are taken from a different port located 90 degrees from the first port. The air velocity measurements are obtained by inserting a sampling probe, 10 feet in length, with an attached pitot tube into the dryer stack.
3. Mine personnel stated that Mr. DeVito and other co-workers had previously conducted emissions tests of the thermal dryer stack at the Consolidation Coal Company, Buchanan No.1 Mine with the most recent previous tests conducted on February 17, 1999. The emissions tests had been conducted at least annually during the past several years.
4. Company personnel stated that Mr. DeVito and other employees of the Research and Development Branch had conducted similar emissions tests at other facilities owned and operated by Consolidation Coal Company.
5. Mr. Kowalski, Technician, was the only eyewitness to the accident.

6. Mr. Kowalski stated that the work scheduled by the research group was to conduct set-up preparations on December 5, 2000, conduct approximately six hours of thermal dryer exhaust emissions tests on December 6, 2000 and finish any uncompleted work on December 7, 2000.
7. Mr. Kowalski stated that he assisted Mr. DeVito in preparing test equipment that would be hoisted to the first walkway platform landing with a rope. The equipment to be hoisted with the rope included a sampling probe and a probe tripod both of which would have been difficult for a person to carry up the stairways due to their length. Mr. Kowalski also stated that Mr. DeVito took the rope and a five-gallon bucket containing tools with him when he traveled to the first walkway platform landing prior to the accident.
8. The consensus of mine personnel was that the first and second platform walkway landings located at the thermal dryer mist eliminator stack was not traveled or examined regularly. Travel to and examinations of the thermal dryer mist eliminator platform landings were only performed when the thermal dryer was not operating. Also, examinations were only conducted when work was scheduled in these areas.
9. Mine personnel referenced an unwritten mine policy that prohibited any person from traveling to the first and second platform walkway landings, located above the thermal dryer explosion relief doors, while the thermal dryer was operating. The explosion doors are located approximately 25 feet above ground level.
10. Mine personnel stated that the thermal dryer was not operating at the time of the accident on December 5, 2000.
11. Mine personnel stated from experience that metal walkway grating deteriorates more at locations where the grating contacts or crosses over other structural material such as support beams. The piece of walkway grating that broke and fell at the first platform landing causing the accident broke loose at a location where a section of grating crossed over the top of a metal support beam. Mine personnel also stated that deterioration of metal grating in these areas results from accumulation of water, ice, coal dust and other debris.
12. Mine personnel stated that deteriorated walkway grating requires regular attention and replacement. The deteriorated walkway grating is replaced with galvanized metal grating.
13. Mine personnel stated that Mr. Jimmy Fuda, plant mobile equipment operator, was the last person that traveled to the first platform walkway landing where the accident occurred. Mr. Fuda traveled to this platform landing approximately one week prior to the accident. Mr. Fuda stated that he did not travel to the side of the platform landing where the section of walkway grating broke and fell causing the accident. Mr. Case instructed Mr. Fuda to travel to this location to evaluate the condition of six straightening vanes that are constructed of plywood and metal. Mr. Fuda reported back to Mr. Case that the straightening vanes were in good condition. The straightening vanes are inserted into the mist eliminator stack to stabilize air turbulence to ensure accurate emissions test.
14. Mr. Case stated that he advised the research group to take a hammer with them to remove any ice that may be encountered.

15. Mr. Kowalski stated that Mr. DeVito was not wearing any type of safety harness.
16. Mr. Kowalski stated that he and Mr. DeVito had worked together previously conducting emissions tests on thermal dryers at other locations.
17. The following information was taken from the latest Buchanan No. 1 Mine thermal dryer stack test report submitted by R.L. Kerch, Director of Air and Water Quality Activities, Consol, Inc. received by the Department of Environmental Quality (DEQ) on April 22, 1999.

- These thermal dryer emissions tests were conducted by Mr. Matthew DeVito and co-workers on February 17, 1999.
- Mr. John Neel, Virginia DEQ Representative, observed these tests being conducted.
- Mr. DeVito certified by signature in the test report that he supervised and performed the work, calculations, activities and tasks that were documented.
- General Information
 1. The objective of this testing was to conduct thermal dryer performance testing for carbon monoxide (CO), carbon dioxide (CO₂), sulfur dioxide (SO₂), nitrogen oxides (NO_x), volatile organic compounds (VOC's), and various gases associated with coal combustion.
 2. The purpose of the tests are to evaluate stack emissions compliance in accordance with standards specified in the DEQ operating permit for the Buchanan No. 1 mine.
 3. The major source of gas emissions from the preparation plant facilities is the thermal dryer exhaust emissions.
 4. The thermal dryer uses heat produced from dual-gas burners to dry the wet, clean coal. The gas burners provide heated air that is directed into the dryer chamber and dries the coal located above. The dry coal falls into hoppers and is discharged onto an outgoing belt line. The gas emissions exit the dryer facility through the stack into the atmosphere.
 5. Gas flow straightening vanes, constructed from plywood, are inserted into the stack to convert gas flow from cyclonic to axial to ensure accurate gas emissions test results.

PHYSICAL FACTORS

The investigation of physical factors at the scene of the accident revealed the following:

1. The fall of person accident occurred on December 5, 2000, at approximately 10:00 a.m., at the first platform walkway landing of the thermal dryer mist eliminator stack.
2. The preparation plant thermal dryer facility is equipped with a mist eliminator stack that is referred to by mine personnel as the dryer emissions exhaust stack. The thermal dryer mist eliminator stack is provided with two platform walkway landings that have metal grating floor material. The first landing is located at elevation 1705 feet, the second landing is located at elevation 1729 feet from the ground elevation of 1575 feet. The straightening vanes are inserted into the exhaust stack on the first landing and ports from which air velocity measurements would be taken, are located on the second landing. The thermal dryer mist eliminator stack is equipped with metal stairways that provide access to the elevated walkway platform landings.
3. The first platform walkway landing constructed around the thermal dryer emissions exhaust stack from where Mr. DeVito fell was used to provide a work area from which straightening vanes were temporarily inserted into the stack to reduce air turbulence during emissions testing. The straightening vanes are constructed of plywood, eight feet in length, four feet in width, and three-fourths inch in thickness. Six equally spaced gate-covered slots are installed on this level to provide access for the vanes to be inserted into the stack. The vanes are inserted into the stack only during emissions testing and are removed after testing has been completed.
4. The gate-covered slots located immediately over the first platform walkway landing where the accident occurred would not seal to prevent moisture and grit escaping from the thermal dryer stack and settling onto the walkway platform.
5. The stairways providing access to the first platform walkway landing was located on the back side of the thermal dryer stack. The walkway platform landing surrounded the stack. The accident occurred on the front side of the thermal dryer stack.
6. The second walkway platform landing did not extend to the front side of the thermal dryer stack, therefore the test equipment would be hoisted by rope to the first landing and carried to the second landing where the equipment would be used.
7. Mine personnel had replaced some deteriorated grating on the first platform walkway landing in January, 2000. However, the replaced walkway grating was located on the back side of the platform landing and not on the front side where the accident occurred.
8. Mr. DeVito fell from the first platform walkway landing to the ground below, a distance of approximately 130 feet.

9. The piece of metal walkway grating that broke and fell from the first platform walkway landing was corroded and deteriorated.
10. Two other sections of metal walkway platform grating on the first landing where the accident occurred were also corroded and deteriorated. One of the deteriorated sections was located adjacent to the piece that broke loose and fell.
11. The section of metal walkway platform grating where the accident occurred measured approximately 24 inches by 38 inches and the piece of this section that broke and fell measured approximately 24 inches by 28 inches. The piece of metal grating that broke loose and fell had deteriorated where the grating crossed over top of a metal support beam. A remaining piece of grating, measuring approximately 14 inches by 10 inches, was lodged against the thermal dryer mist eliminator stack on the first walkway platform landing. Several smaller pieces of corroded grating material were observed lying on top of the steel support beam.
12. A rope, bucket and hammer were observed on the first platform walkway landing from which Mr. DeVito fell. Mr. Kowalski confirmed that Mr. DeVito had taken this equipment with him when he traveled to this location.
13. The first platform walkway landing where the accident occurred was approximately 15.66 feet in length and 38 inches minimum in width. The platform walkway landing was constructed of one and one-half inch by one-eighth galvanized bar grating mounted on top of steel support beams. The walkway grating was connected to the support beams with metal clips. The steel support beams are spaced on 34 inch centers.
14. The dryer emissions exhaust stack is 180 feet in height and has an inside diameter of eight and one-half feet.

CONCLUSION

On December 5, 2000, at approximately 10:00 a.m., a fall of person accident occurred at Consolidation Coal Company, Buchanan No. 1 Mine Preparation Plant. Matthew S. DeVito, Research Group Leader, Consol Energy, Inc., received fatal injuries when a piece of platform walkway metal grating broke loose causing Mr. DeVito to fall approximately 130 feet to the ground below.

ENFORCEMENT ACTION

The following enforcement action was taken as a result of the investigation:

An order of closure, No. JEB 0001527, was issued under Section 45.1-161.91 A (ii) of the Coal Mine Safety Laws of Virginia on the preparation plant – thermal dryer emissions exhaust mist eliminator stack to preserve the scene of the accident pending completion of an investigation. The order of closure was modified to allow operation of the preparation plant – thermal dryer facilities in accordance with an action plan submitted by company officials that was dated December 6, 2000.

An order of closure No. JEB 0001576, was issued under Section 45.1-161.91 A (i) referencing 45.1-161.275 C of the Coal Mine Safety Laws of Virginia. On December 5, 2000, at approximately 10:00 a.m., a slip and fall accident occurred at Consolidation Coal Company, Buchanan No. 1 Mine preparation plant – thermal dryer mist eliminator stack. Mr. Matthew DeVito, employed by Consol Energy Inc., received fatal injuries when he fell approximately 130 feet from a walkway platform landing to the ground below. Mr. DeVito was making preparations to conduct environmental compliance emissions tests in the preparation plant thermal dryer mist eliminator stack and was located on the first walkway platform landing when a piece of walkway platform grating broke loose causing Mr. DeVito to fall from the platform to the ground below causing fatal injuries. An imminent danger was present on the walkway platform landing located approximately 130 feet above ground level of the thermal dryer mist eliminator stack in that the elevated platform was not maintained in good repair. On-site observations revealed during a fatality investigation that a section of metal grating measuring approximately 24 inches by 38 inches had deteriorated allowing a piece measuring approximately 24 inches by 28 inches to break loose causing Mr. DeVito to fall from the platform to the ground below resulting in fatal injuries. Two other sections of platform landing grating, one which was located adjacent to the piece of grating that broke loose and fell, were also observed in a corroded and deteriorated condition and had not been maintained in good repair.

A notice of violation, No. JEB 0001577, was issued under 45.1-161.275 C, of the Coal Mine Safety Laws of Virginia. On December 5, 2000, at approximately 10:00 a.m., a slip and fall accident occurred at Consolidation Coal Company, Buchanan No.1 mine, preparation plant – thermal dryer mist eliminator stack. Mr. Matthew DeVito, employed by Consol Energy Inc., received fatal injuries when he fell approximately 130 feet from the first walkway platform landing to the ground below. The metal grating of the elevated stairway platform located at the first and third landings from ground level of the thermal dryer mist eliminator stack was not maintained in good repair in that the metal grating was corroded and deteriorated. The Coal Mine Safety Laws of Virginia, Section 45.1-161.275 C requires that platforms, stairways and runways be kept clear of stumbling and slipping hazards and maintained in good repair.

RECOMMENDATIONS:

1. The operator should develop and implement a planned inspection program for all plant platforms, stairways and other travelways where personnel are required to travel and work. Inspections should be performed by trained and experienced persons. Priority during inspections should be given to those locations where conditions and experience indicate the highest risks for metal deterioration and fatigue.
2. Elevated platforms, stairways and runways shall be kept clear of stumbling and slipping hazards and shall be maintained in good repair.
3. Elevated platforms, stairways and runways that are traveled infrequently should be examined for hazardous conditions by preparation plant officials prior to anyone traveling or performing work in such areas.
4. Personnel working from elevated work levels should utilize a TYPE I or TYPE II, ANSI A 10-14, personnel fall arrest/restraint system, designed to prevent a person from falling.

SIGNATURE SHEET

This report hereby submitted by David J. Elswick and approved by Frank A. Linkous:

DAVID J. ELSWICK, MINE TECHNICAL SPECIALIST Date

FRANK A. LINKOUS, CHIEF Date

APPENDIX

- VICTIM DATA SHEET
- PERSONS PRESENT DURING THE INVESTIGATION
- MINE LICENSE INFORMATION

VICTIM DATA SHEET

Name:	Matthew S. DeVito
Employer:	Consol Energy, Inc. Research and Development Branch
Occupation:	Research Group Leader
Mailing Address:	6039 Library Rd. Bethel Park, Pa. 15102
Date of Birth:	November 6, 1955
Total Experience:	Twenty years
Experience with Present Company	Twenty years
Experience in Present Occupation:	Twenty Years

The following personnel provided information and/or were present during the investigation:

CONSOLIDATION COAL COMPANY

Barry Dangerfield	Vice President of Group 3
Jack Holt	Vice President of Safety
Mike Onifer	Mine Superintendent
Bill Hagy	Assistant Mine Superintendent
Elizabeth Chamberlain	Corporate Safety Director
Tom Burton	General Plant Foreman
Michael Case	Assistant Plant Foreman
Bill Fertall	Manager Engineering of Group 3
Raymond Perr	Contract Administrator
Dennis Perry	Safety Inspector
Ed Davidson	Supervisor, Human Resources
James Vandyke	Miner's Representative
Allen Osborne	Utility Preparation Plant
Jimmy Fuda	Mobile Equipment Operator
Allen Brewster	Preparation Plant Welder

**CONSOL ENERGY, INC.
RESEARCH AND DEVELOPMENT BRANCH**

Denis Kowalski	Technician
Jeffrey Withum	Senior Research Technician

MINE SAFETY AND HEALTH ADMINISTRATION

Ray McKinney	District Manager, District 5
Roy Davidson	Electrical Engineer
James Poynter	Conference and Litigation Representative
Mike Shaughnessy	Mechanical Engineer - Technical Support
James Baker	Educational Field Services Specialist
Arnold Carico	Mining Engineer
Russell Dresch	Electrical Engineer
Erik Sherer	Mine Safety and Health Specialist

VIRGINIA DIVISION OF MINES

Frank Linkous	Chief
Carroll Green	Mine Inspector Supervisor
Danny Altizer	Coal Mine Inspector
Joseph Altizer	Coal Mine Inspector
John Brown	Coal Mine Inspector
Terry Ratliff	Coal Mine Inspector
Opie McKinney	Mine Inspector Supervisor
David Elswick	Coal Mine Technical Specialist
John Talbert	Coal Mine Technical Specialist

MINE LICENSE INFORMATION

Official Corporation:	Consolidation Coal Company
Official Business Name of Operator:	Consolidation Coal Company
Person With Overall Responsibility:	Mike Onifer
Person In Charge of Health and Safety at the Mine:	Mike Onifer